

## PATENT ABSTRACTS OF JAPAN

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## (54) MANUFACTURE OF LIQUID CRYSTAL DISPLAY ELEMENT

## (57)Abstract:

PURPOSE: To obtain a manufacturing method for a liquid crystal display element wherein liquid crystals have good orientation and domain trouble due to liquid crystal reverse torsion hardly occurs.

CONSTITUTION: Polymeric material is thrustured between a master mold 5 which has a number of recessed grooves 4 formed in parallel and the molding plane of a transparent electrode 2 of an electrode substrate 3 to form an orientation film 7. Prior to hardening the polymeric material, the master mold 5 and the electrode substrate 3 are relatively shifted to the extended direction of the recessed grooves 4, and shearing force produced at this moment is loaded to the orientation film 7. After the orientation film 7 is hardened, it is separated from an interface between the master mold 5 and the orientation film 7 to obtain an electrode substrate that the orientation film 7 with recessed grooves 8 transferred from the master mold 5 is formed on the molding plane of the transparent electrode. Two electrode substrates 3 are stucked together to form liquid crystal cells, and then liquid crystal is filled in between the electrode substrates to give liquid crystal molecules pretilting angles.

